

ABSTRACT OF THE DISCLOSURE

A directional coupler type optical modulator with traveling-wave electrodes includes a first directional coupler region, a waveguide wave coupling region, a second directional coupler region, and a set of
5 noncrossing traveling-wave electrodes disposed along the outside of the waveguides. The electrodes of each directional coupler are connected to the traveling-wave electrodes via air-bridges. The waveguide structures are of the P-I-N type having a common N-type conducting layer which provides delta-beta operation of the directional
10 coupler, and both cross and bar states are controlled by a single input signal.